

# Line Magnetic LM-88IA, LM-150IA, LM-845IA, LM-805IA and LM-845 Premium – part 1

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A group review of five Line Magnetic amplifiers using KT-88 and KT-150 Push-Pull and 805 and 845 SET tube designs

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Review samples supplied by Frank Suijk of [A Tube High Fidelity](#)

Retail Prices in the Netherlands:

LM-88IA – 2.999 euro

LM-150IA – 4.999 euro

LM-845IA- 3.999 euro

LM-805IA- 4.999 euro

LM-845 Premium – 9.999 euro

When my good friend Jan Cramer aka Meneer Buis (Mr. Tube) tipped me about the Line Magnetic brand and I had a first look at their models, I got excited right away. These amplifiers have a very robust and solid look and a unique styling. These are amps with attitude, proud of what they are. Then, when I discovered that the brand employs a wide range of tube configurations, I got even more excited. Tubes in and of themselves do have certain sound characteristics but their implementation arguably has a larger share in the end result, meaning that you can't really say much about the perceived differences between two different tube amps of two different brands as a consequence of the tubes that were used. When the same manufacturer is behind such products, however, then it becomes a much safer bet to say something relatively conclusive, for example about how KT88 compares to KT150 or how Push-Pull compares to SET. So, in order to make a nice showcase of the Line Magnetic brand and a good cross-section of their lineup, I set out to review a representative range of amplifiers using various tube types.



*Removable protective cages make smart use of banana speaker connectors for a secure fixing yet easy removal.*

## BC Diffusion and A Tube High Fidelity

An internet search produced a couple of results from which it was not immediately clear which was the importer/distributor. One of the sites that I found suggests to be an importer but is not actually an official distributor or retailer. The other site that I found turned out to be the official distributor for Europe, BC Diffusion, where you can find the list of official dealers for Europe. I figured that BC was the company that I should contact for my review plan. Some time passed while I tended to other business, and when it was time to set the wheels in motion, I did another internet search and this time found 3 obvious results: the aforementioned importer which would later be identified as a parallel importer, the actual European importer [BC Diffusion](#), and a brand new site called [A Tube High Fidelity](#).

Following the information on the BC Diffusion site, A Tube High Fidelity turned out to be the official dealer of Line Magnetic in the Netherlands so I opted to contact both A Tube High Fidelity and BC Diffusion and received a response the very same day from Frank Suijk, co-owner of A Tube High Fidelity. As it turned out, Frank had just recently settled in his new store in Almere and was now finalizing his website, showcasing the entire Line Magnetic lineup as well as various other electronics- and speaker brands. Frank was more than happy to jump on board and with help from BC Diffusion, provided five different Line Magnetic tube amps. Also see the separate [A Tube High Fidelity Company Special](#).

## Company History

Line Magnetic is established in Zhuhai, China, founded in 2005 by the Zheng brothers, both passionate audiophiles. The Line Magnetic Audio Company is a combination of Foshan Line magnetic audio studio and Zhuhai Line magnetic Audio Co., Ltd. The former is established in Zhuhai by elder brother Zheng Cai and the latter by younger brother Zheng Xi, in Zhuhai City.

This is how it started. In 1995 Mr. Zheng Cai, once the General manager and chief engineer at Cayin and later one of the shareholders, was in disagreement with the board when he suggested developing truly high-end amplifiers. After he left Cayin he worked for various other companies in the roles of engineer, researcher, developer, and co-founder, while gaining more and more understanding of Western high-end audio. For example, he was always interested in traditional Western Electric products and used to spend his spare time repairing and restoring products. This, together with his earlier experiences provided a solid foundation for starting the Line Magnetic Audio company.



*Build quality is sublime – even the remote control is finished impeccably.*



*The unit is all metal, even the bottom plate. It seems that this sample has the wrong screws fitted or is missing rubber feet, probably an oversight.*



## Tube principles

Thanks to audio buddy Meneer Buis and his own quest on the road to tube nirvana that resulted in a steady stream of tube amplifiers reaching my listening room for evaluation, I've had my fair share of tube amp experience in a relatively short timeframe. During these comparisons, I noticed how a SET amp can sound incredibly pure but also very lively and dynamic, even more so than any solid state amp that I had used until that time. However, this would only be the case when the match with the speaker was ideal. Apogee magnetostatic speakers, for example, require too much power to work well with SET amps. Some Push-Pull designs, however, made the [Duetta Signatures](#) shine like never before. For those unfamiliar with these two principles, I will explain a little about PP and SET.



### Push-Pull

In Push-Pull, there are two (or a multiple) output devices (be it transistors or tubes) that work together to amplify the sine wave. This can be done in Class AB but also in Class A. In Class AB this means that one output device takes care of the upper half of the sine wave, the positive side and the other takes care of the lower half, the negative side. This provides more power than using a single tube in class A but also introduces crossover distortion in the section where one device takes over from the other. Additionally, most people agree that while multiple output devices are often inherently more linear and have a higher factor (grip on the speaker), they will usually also sound less pure. The best Push-Pull designs in my experience so far use only two tubes per channel. When Push-Pull is used in Class A mode, each output device amplifies the entire sine wave but one of the devices does this in reverse phase. This is how Accuphase Class A transistor amps work, for example. The Push-Pull Line Magnetic amps work in Class AB.

### Single Ended

Single-Ended means that there is only one power output device per channel, rather than 2 or multiples thereof as for Push-Pull. So, a Single Ended Triode amplifier uses only one Triode power tube per channel. Single Ended, by definition, is Class A.

### Triode

A Triode is a tube type as well as a connection method. A Penthode tube, for example, can also be connected in Triode mode. Triode mode is only one of several different schemes that a tube can be connected up as. Penthode mode, for example, is more efficient but many people feel that the Triode mode is the purest mode for a tube.

Traditional triode tubes delivered only a couple of watts, necessitating the use of extremely sensitive speakers such as horn-loaded Lowther units. In their quest to combine purity with power, however, several tube companies have moved the goalposts. Vaic, now Ayon, for example, has created the 52B, capable of about 22 watts, doubled to 55 watts by using two of them in parallel. Do note this is not Push-Pull but actually PSET, Parallel SET, arguably a less pure implementation but achieving impressive results in my listening sessions nevertheless. The latest Ayon designs using 82B tubes, deliver a whopping 80 watts, which is incredible given their ancestry. Purists maintain that the original flea-power rated triodes sound best but these do severely limit speaker choice.

I've only touched the surface here, of course, there are exceptions and I'm sure that there are many more takes on the matter (so many people, so many opinions) but I hope to have supplied enough background info to help interpret the rest of this article.

### Build Quality

Today, all the accomplishments are the result of a team of experienced audiophile engineers. But lest you think that this is yet another Chinese brand offering me-too products, I'll be quick to add that these products have a unique styling and are not just finished to a high standard, or a relatively high standard given that they are of Chinese origin, nope, they are finished to an extremely high standard, period!



The LM-881A has a bias meter on the top, the more expensive models have one or more meters on the front panel.

Honestly, handling these amps with their large heft, solid front panels, and piano lacquer finish feels more like using Accuphase or Luxman electronics than anything else. They're heavy, too! Peeking at the insides through the ventilation holes in the bottom, there is point to point wiring for all the critical stages (tubes and transformers, for example) and where circuit boards are used, these are populated very neatly, with wires soldered to them in perfect alignment reminiscent of the stereotypical German precision. Line Magnetic does not supply a huge amount of technical information but do state that they employ Japanese ALPS potentiometers, American MIT and German Mcap and Mundorf coupling capacitors, Toroid Z11 Core transformers (of unknown origin) for the power supply and Japanese Audio Grade EI output transformers. It seems clear that the makers wanted to use the best materials and arrived at certain combinations, rather than simply using the same make for everything. Given their modest cost compared to German or American alternatives, they could be excused for taking a shortcut here or there, but this was clearly not on the agenda.



### Tubes

The Line Magnetic-branded power tubes are made by Shuguang and these are used in all the amplifiers that I tested, except for the LM-881A, which uses JJ KT-88 power tubes. In addition, the LM-8451A and LM8451A Premium use 310A tubes that are replicas of the original Western Electric designs, made by Line Magnetic.

### Running in

The LM-8051A had already been used by Frank in his audio store and so this amp did not need any running in, only warming up. The other amps, however, were newly supplied by BC Diffusion. So, prior to my serious listening, I used each of them separately to play music for the majority of 2 days. Naturally, I also did some initial listening during this time. I found that all the amps sounded impressive from the first moment of switching on but also noticed a slight sharpness in the upper midrange/lower treble with certain music, especially with the LM-8451A, which mellowed out after a few hours and seemed to have completely settled down after a couple of listening sessions. The LM-8051A was definitely smoother from the very start and did not change its character much while running in or in successive comparisons thereafter. After the running in period, each amp was allowed to warm up for 30 minutes prior to starting the evaluations. For all amps, the same playlist was used, containing a mix of music genres ranging from electronic and techno to folk, soul and smooth jazz.



LM-8051A power tube socket. Note the conveniently placed Hum Balancer and Bias Adjust pots.

### Fixed Bias

All the Line Magnetic amps use a fixed bias. This means that you adjust it yourself using a screwdriver and the visual indication of the built-in meters. There are ongoing discussions among audiophiles and manufacturers alike about the merits of fixed and automatic bias. Some maintain that fixed bias yields better results, others claim that when implemented properly there should not be a difference. Personally, I do not yet have a take on this. I have heard excellent amps using either method.

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I followed the manufacturer's recommendations and checked again every now and then and was glad to note that the amps retained their settings very tightly.

### Integrated or Power Amp

All the Line Magnetic amps that I have for review are integrated amplifiers but they all also have inputs that bypass their built-in preamp sections, for use with an external preamp. LM refers to these as "pre-in" but they actually should be labeled "main-in". Labeling aside, these inputs function as expected and so the amps could be assessed as a power amp as well as an integrated amp.

I will be reviewing all the Line Magnetic amps in my two systems: the main setup in the large room, using Wilson speakers and the secondary setup in the smaller room. In addition, the two push-pull designs will also be tested in audio buddy JW's system, using Apogee Duetta Signatures.

Ok, I'm done rambling. Now the real fun can start!



Currently, the secondary system is a work in progress. For example, I've not yet decided which amplifier and speakers to use. So far, I've been using the PrimaLuna DiaLogue Premium amplifier with EL34 tubes, combined with whichever speakers are over for review or visiting courtesy of a friend. For this review, I had envisioned to use Xavian speakers but alas the delivery got delayed and so I had to come up with a contingency plan. I turned to Peter van Doornum of [Gustavson Audio](#) and explained my motives and he was more than happy to let me use his LS-One speakers, which I had [already reviewed](#) not too long ago. As it turned out, all the Line Magnetic amplifiers worked marvelously with these speakers. Near the completion of this review, the Xavian speakers arrived and so I was still able to use them with the Line Magnetic amps but I'll report on that in the separate Xavian review.



To start off, first I needed to re-assess the Gustavsons in this particular setup. The room has a different shape and so the sound is different from that in the main listening room, where I initially reviewed these speakers. Fortunately, the relatively big speakers had no issues at all performing in this room, not even when the left-hand speaker is relatively close to the side wall. There were no weird phase issues and no bass boom. The only thing that I could notice on occasion was that the left speaker had more bass reinforcement than the right speaker. But this was only with certain music and not at all detractive. To re-familiarize myself with the speakers in this room, I started with the [Ayon Stealth](#) DAC/preamp and Push-Pull [PrimaLuna DiaLogue Premium](#) amp with EL34 tubes. The source for all listening in this room is the [AudioAanZee Reference Flow](#) music server with [Euphony Drive](#) running [Room Ready](#). Well, it must be said: these really are very special speakers, quite unlike typical box speakers, and they still combine very well with the PrimaLuna. As soon as you start listening to music using these speakers, especially with tubes added to the mix, the critical mind shuts off and the emotion flows.

During all my reviews of tube amps, I've always found the 4-ohm outputs to sound best, even with speakers that have an 8-ohm rating. So, for this review, I've always used the 4-ohm outputs except where noted differently.

#### Line Magnetic LM-88IA as a power amp



For all the tube amps that have visited these quarters, none of them used KT-88's and therefore, unlike with the Tung-Sol KT-150's, I have no expectations of how they should sound. The LM-88IA uses JJ tubes, delivering 45 watts. Going from the PrimaLuna power amp, still fed from the Ayon Stealth DAC/Preamp to the Line Magnetic LM-88IA, the latter used as a power amp via its "pre-in" inputs, there was an immediate increase in refinement, resolution, and airiness. With the sensitive Gustavsons, the Line Magnetic amp has a tiny bit of hum which is really very normal for just about any tube amp when used with a sensitive speaker but nonetheless, I should note that the PrimaLuna is even quieter. But it's the sound that counts and the LM-88IA's sound was every bit as sonorous and powerful but tighter and more transparent yet also considerably smoother. Especially from the upper midrange and up, the Line Magnetic amp was a lot more refined and a lot more forgiving, in spite of being more revealing. Along with this came a soundstage that seemed larger overall but most of all deeper and more clearly layered and separated in the depth plane.

The PrimaLuna arguably still has a more impactful sound, making percussive sounds come across as being more impressive at times. But the Line Magnetic has a kind of magic that I do not hear with the PrimaLuna. There is an immediate emotional engagement with this amp that draws you in and makes it hard to stop listening. Its timbre is also very natural timbre which coupled with its high level of refinement is also very appealing and the more I listened to it, the more I was sucked into the performance.

#### Line Magnetic LM-88IA as an integrated amp

So far, this was still using the LM-88IA as a power amp only, combined with the Ayon Stealth DAC/preamp. Taking the latter out of the equation and adding the [Aqua Formula xHD](#) DAC and using the LM-88IA as an integrated amp, the presentation became more neutral and more transparent. Some of the aforementioned sonority and bass solidity were now reduced but in its place came a higher level of transient snap, resulting in a higher level of excitement. While it was now more neutral and transparent, the LM-88IA's inherent relaxed and smooth character was retained and the emotional aspect still shone through, now combined with more points scored in audiophile parameters. The observed differences are in line with how the Ayon and Aqua are known to compare but also clearly demonstrates that the LM-88IA's preamp section is itself pretty transparent. It does not in any way mask the differences in the front end and fully showcases the Aqua's impressive resolution.

To fully assess all the Line Magnetic amps' capabilities, I opted to do the rest of this part of the review with them in integrated amp mode. I will further assess their power amp capabilities in the next part of this review, using the [CH Precision CI](#) DAC/controller as the preamp and the Wilson Watt/Puppy speakers.

Unlike the other Line Magnetic amps that I tested, the LM-88IA can be used in two modes: fixed bias and cathode bias. The latter is a form of auto bias and in this implementation, it also changes the amp's character, from neutral, tight and articulate to warmer, more rounded and smoother. I preferred the former mode using fixed bias as it was already producing a nicely sonorous and smooth sound but I can certainly imagine people falling for the extra-lush performance using cathode bias, too.

#### LM-150IA as an integrated amp



The LM-150IA is also a Push-Pull design but with more modern and more powerful tubes. From earlier experiences, I already knew that these KT-150 tubes seemed to hold the precious middle ground between transistor neutrality and free-flowing tube magic and the LM-150IA indeed further solidified my suspicions.

This amp uses KT-150 tubes made by Tung-Sol, the very same ones as I use with the PrimaLuna (when I don't use the EL-34's) and also the same ones as are used in the [Audio Research Ref75SE](#). The latter is biased conservatively to deliver 75 watts. The LM-150IA delivers 100 watts. For a comparison, see part 4 of this review.



Swapping the LM-88IA for the LM-150IA using the same setup, the former amp's subtle hum was gone. However, there was now a mechanical hum, seemingly coming from the smallest of the top-mounted square enclosures. I mention this only because none of the other Line Magnetic amps have any mechanical hum. This is no issue, though, as it was not any louder than the mechanical hum that I often hear from solid state amps (the Rowland model sixes included) and it was not audible from the listening position.

Much in line with my earlier experiences with KT-150 tubes, the LM-150IA is a very neutral amp. Its sound was cleaner, less sonorous, less free-flowing compared to the LM-88IA. The latter sounds fuller in the midbass, but one could probably also call that coloration. It's a matter of perspective and personal taste. With the Gustavsons, in any case, this resulted in a more cerebral and less magical sound. But it was also evident that this amp is very confident and very powerful. Especially bass-drum and percussion sounded more realistic and more impressive, more so, too than with the PrimaLuna. The LM-150IA's bass was less voluptuous than with the LM-88IA but tighter and better defined. Its treble was again superb: refined, articulate, airy and open yet completely free from edginess.







Naturally, there is an adjustment period when switching from one kind of delivery (a smooth one) to another (a cleaner one). One simply gets used to a certain sound, but sure enough, after having fully acclimatised to the more neutral sound of the LM-150IA, it dawned on me that it has the hallmarks of a very good transistor amp such as great bass control and articulation, lots of power and fast pacing, combined with a level of nuance and openness as well as a lack of dynamic restraint that is hard for many transistor amps to achieve. If that sounds like the opposite of what one might hope to achieve when going for a tube amp, should note that I don't personally lean toward one technique or the other. I'm happy with whichever amplification technique that yields the best results in a given situation. I should probably also note that my current reference in transistor amplification is the [CH Precision A1](#) power amp that I use in the main listening room and since I used it, it has proven to be incredibly difficult for any tube amp to approach the A1 in terms of transparency, articulation, and tightness. The LM-150IA, however, comes closer than any of the ones tested before.



On another note, when combining speakers and amplifiers, it is always very much a case of horses for courses, meaning that it is important to pair a given speaker with the appropriate amp. It is often said that a power amp cannot be too powerful but I find that very powerful amps like to be able to distribute more than only a fraction of their power, to be in their element. When pairing a very powerful amp with very efficient speakers, this can lead to a more constrained, less free-flowing presentation than the amp really is capable of. A good example of this can be read in my review of the [AvantGarde Ultras](#). In the case of the LM-150IA, this would also turn out to be true, for when I paired it with the Duetta Signatures it delivered the absolutely most glorious sound that I heard with these speakers so far! But I'll dive into that in part 4 of this review.



The LM-845IA can be considered an upgrade of the LM-518IA. It is a pure class A SET amp that uses a single Shuguang 845 tube per channel, to deliver 22 watts.



SET amps usually have a hum balancing control hidden somewhere inside the amplifier. The Line Magnetic amps, however, have this control on the top side where it can be accessed with ease. For all amps, I checked and corrected the bias according to the manufacturer's specs and set the hum balancer to produce the lowest hum.



Swapping the LM-150IA for the LM-845IA using the same setup, to my surprise there was no hum to speak of, which is quite unusual for a SET design! The Vaic SET amps, by example, which I've heard again right after they had been serviced to minimize their hum and new tubes had been fitted, still had a significant hum that was even audible from the listening position when not playing music.

The LM-845IA's presentation was different from the two Push-Pull designs but highly fascinating from the start. The sound is not as obviously linear as with the PP designs, but with this amp, it seemed like there was more going on as if the musicians were more motivated and playing more vigorously. Even pieces of music that seemed ordinary with other amps were infused with a newfound presence and life. This was really quite astounding, and at times I was actually listening with my mouth agape! Yes, SET can have that effect, with the right speakers. These Gustavsons are very easy to drive and fortunately so are the Wilsons but Apogee magnetostatics, for example, need not apply. In this case, however, the sound is detailed, tight, fast, pure, very dynamic and wide-open but also refined and oh-so free-flowing. That last aspect seems to be one of the typical SET strengths. These amps have the uncanny ability to put the performer right there in the room with you. I've heard this before with the [Vaic Reference S20](#) P-SET amps and with the Line Magnetic amp once again it seems that soundstage size, depth, and layering is a particular SET forte. The sound is very pure, not warm or thick or rose-tinted in any way, but extremely natural and involving and at times pure magic. That purity and magic midrange is another quality that is often associated with SET designs but I should note that while many SET amps sound magical, not all sound this utterly pure.



LM-845IA power tube socket

With the LM-845IA, the sound is pretty much as pure as it gets but it also has excellent bass control and the timbre is wholly convincing. Sure, this 22-watt amp does not have the tight control and raw power in the bass that the LM-150IA has but with the Gustavsons, it has more than enough and it could truly play as loudly as I liked. Even when pushing it, the watt meters did not go much further than halfway. At some point, I played a recent Madonna album with very heavy electronic drums and as I cranked up the volume I got something of an Adrenaline-rush. This was pure fun!

#### Line Magnetic LM-805IA as an integrated amp



Swapping from the LM-845IA to the LM-805IA using the same setup, interestingly, the sound was similar but also different. Where the two amps were similar was in terms of the openness, dynamics and superbly free-flowing quality of the soundstage. The difference was that the LM-805IA sounded considerably fuller, smoother and richer. The LM-805IA was also much more powerful and sonorous in the bass, significantly richer and smoother through the midrange, and gentler and more fluid in the treble. And, of course, it actually has more power, too. The latter was not required with the Gustavsons as they played more than loud enough with the 22-watt LM-845IA, but I did notice that some more dynamically demanding music was reproduced with more ease when playing loudly. At times it was like the amp was begging me to go louder. And when I did, not once did it sound stressed, rounded or compressed. And not once did I manage to get it to distort. Not that I heard anything of the sort with the LM-845IA.

#### Variable Negative Feedback

The LM-805IA has something rather unique: a variable Negative feedback control. This is something that I have only ever seen before on the [CH Precision](#) amps and is something that I find to be very useful. Line Magnetic does not specify precisely what the button does or if any other form of feedback remains and if so in what ratio but from operating it, it quickly became evident that the lowest value represents the lowest amount of Negative Feedback, with the amount of Feedback increasing with every step up. The biggest difference is between the first and second step, with smaller increases thereafter.



LM-805IA power tube socket





The lowest setting makes for the utmost free-flowing soundstage with the biggest depth and it produces vocals that float freely in the air, leaping out from the background, far into the room. This setting produces the smoothest, creamiest sound and as such is also most forgiving of lesser recordings, but you do pay a price in bass precision and timing. With this setting, the bass is still quite powerful and even more voluminous than at higher settings. This may actually explain some of the effects that I heard first when using the Vaic amps (that have no/very little feedback) with the relatively sensitive Dali Ikon 6 speakers and their bass power really surprised me when compared with the same speakers driven with various transistor amps.



When increasing the Negative Feedback on the LM-805IA, the bass does get considerably tighter, more incisive and more articulate and the whole presentation becomes cleaner and more controlled, which, technically speaking, is probably truer to the source. When switching back and forth using various pieces of music, it became clear that the lowest setting, while emotionally most engaging, did reduce instrument separation, "gelling" everything more together in a slightly blurry manner. You could say that in this case one of the typical SET strengths got enhanced while another got reduced. The beauty of this option, of course, is that one can simply select the setting that is most appropriate, or most complimenting the speakers of choice. For example, if a very tight-sounding speaker is used that may err to the over-controlled, then a lower Negative Feedback setting will reign things in nicely. Likewise, when using a speaker that requires some more control, then a higher setting will pull things in focus.



The LM-845 Premium is quite a special amplifier. It uses Shuguang 845 output tubes and 300B driver tubes and its 310A tubes are Line Magnetic-made replicas of the original Western Electric designs. As the only amp in the lineup that I tested, all the tubes are arranged in a perfectly symmetrical arrangement. For me that is important but then I know that I am picky about cosmetic matters. Anyway, there is no question about it: this impressive amp is the main conversation piece in any living room!



Its two enclosures suggest the use of a separate power supply but nothing could be further from the truth! The unit with the tubes holds all the amplification circuitry, tubes and power supplies, and all the operational controls. The other enclosure actually contains the oversized output transformers. As rumor has it, this two-unit reference amp is an upgrade of the LM-219IA, introduced in part following requests from dealers that were having a hard time hauling the super-heavy amps (~60kgs!) around their shops and delivering them to customers. The official take on this is that the LM-219IA is originally meant for the Chinese market while the LM-845 Premium is the intended replacement for the European market.



No matter the reasoning behind it, the fact remains that this is a beautiful beast of an amp. Compared to the LM-219IA, the build quality has made a significant leap forward. Where it could be seen that the latter was comprised of individual metal panels, the LM-845 Premium's enclosure is made in a seamless fashion, seemingly from a continuous block of metal. Naturally, this isn't the case, it would be immovable if so, but its edges are welded together so very nicely that it certainly seems that way. Another upgrade that I could see is the beefier, more upscale, speaker binding posts. What differences exist inside, I don't know and I haven't heard the LM-219IA so I can't make any comparisons with it. What I *have* heard, of course, are the other 4 Line Magnetic amps that I wrote about in the earlier parts of this review. And let me state it unequivocally right now: the LM-845 Premium wears its "premium" tag very rightfully so!

LM-845 Premium with Gustavson LS-One



At this stage in the review, the Push-Pull amps have returned. Remaining are the LM-845IA and LM-805IA, for comparing to the LM-845 Premium. But I needn't have bothered. It took me all of 10 seconds to realize that the latter sounds better than any of the amps that preceded it.

It's evident that the Premium is in its element driving the Gustavsons, not just from the tight and articulate sound but also from looking at the watt meters which move only a little bit even when playing loudly. With the Gustavsons, the bass may not have the LM-805IA's slam but there is also no dynamic compression. Compared to the LM-805IA the LM-845 Premium was much tighter, much more articulate and a lot more transparent. It's more like listening to the LM-845IA in terms of purity but more even-handed and even more refined. Lest you think that the regular LM-845IA is somehow lacking, let me quickly correct that. With sensitive enough speakers such as the Gustavsons, the LM-845IA is truly brilliant. But the LM-845 Premium was simply *even* better. I can best describe this by saying that the latter was even more convincing, producing music with such realism that you immediately recognize that it is superior to the others.



The LM-845 Premium has the speed and communicative powers of the LM-845IA, the bass fullness of the LM-88IA, the midrange richness and texture of the LM-805IA and the neutrality of the LM-150IA. It has all this, with an even more intimate, emotional delivery, then further adds to it by being even more coherent and transparent. Then, the Premium does another quite astonishing trick: it sounds more relaxed and smoother than even the LM-805IA yet is more articulate, faster and precise than the LM-845IA!



Its bass is clean, fast and articulate, but less incisive than that of the LM-845IA and less bold and sonorous than that of the LM-805IA. I can imagine some people preferring the spicier 845 or the bolder and richer 805 but there is no doubt that the LM-845 Premium is more correct and the more audiophile amp. Its purity and transparency truly are state of the art!



Best of all worlds – when combined with sensitive speakers

The LM-845 Premium's supremacy is so evident that I could just end the review right here. But I won't, of course! Still remaining is a test combined with the Wilsons. But before I go there, I need to insert a little disclaimer. Any SET amp's Achilles heel is power. Traditionally, one should not expect too much from a SET amp in terms of bass power and control. The area where these amps typically excel is in the midrange and the Line Magnetic SET amps that I reviewed certainly do. However, they also manage to sound surprisingly great in the bass. With efficient speakers, these amps come close to what a medium power Push-Pull amp such as the LM-88IA can do in the bass which is pretty good actually. But when more power-hungry speakers are used, a SET amp will let you notice in the bass and the overall dynamics.





The Wilsons are relatively easy to drive but they have some impedance dips and, let's face it, they're not 100+ dB horn designs, which is what one will more typically use with low-power SET amps. The LM-845 Premium manages to squeeze 30 watts from its pair of 845 tubes which is quite amazing but the amp does not have the muscle of the 48-watt LM-805IA, let alone the LM-88IA or LM-150IA Push-Pull designs. But still, the Wilsons are my reference speakers and they are very revealing so I was eager to see how this reference amp from Line Magnetic would perform.

If a superlative bass impact is the only thing that matters then one need not look at tubes, SET or otherwise. But you, dear reader, would not have made it all the way to the end of this review if that was the case. There's more to music than bass. And this is where tubes in general and SET, in particular, come in.



Sure enough, the LM-845 Premium still clearly conveyed its supremacy via the Wilsons. Its transparency, neutrality and natural purity were absolutely drool-inducing. In these fields, it performed easily as good as the CH Precision A1. And, of course, the amp excelled at suspending disbelief and recreating a live event right in front of my nose.

But while its watt meters were sort of idling with the Gustavsons, now they predominantly at around 75% even when playing at moderate levels, meaning that the amp was not exactly in its happy place. Still, apart from the lack of bass pressure and overall less than dynamic delivery I couldn't hear any artifacts or increase in compression, even when really pushing it toward all that the amp could deliver. There was simply no distortion and never ever any harshness. This goes to show how well-built this amp really is. Clearly, the power supply and output transformers are not only over-specified but also of extremely good quality. If they were only oversized, then the amp would not have sounded

## On Balance

While the bass is not typically a tube forté, midrange texture, liveliness and sheer emotional involvement are not typically transistor fortés. For bass quality (not necessarily volume or body), transparency, neutrality, dynamics, and overall refinement, the CH Precision A1 is my reference. Especially given its astronomical price tag this is not likely to change any time soon. However, all of these Line Magnetic amps had individual qualities that made them stand out and approach the A1 and in parts perform even better.

Tubes and transistors, of course, are two different worlds. Drum and Bass and most other electronic music where the bass is the primary focus will probably always sound better with Push-Pull tube amps and even better with transistor amps. Still, you might be surprised how powerful and propulsive a dance track can sound even with a 22-watt SET amp when combined with more sensitive speakers such as the Gustavsons! What all the Line Magnetic amps consistently do best, though, is to convey the human element, to suspend disbelief, to bring the artist into the room as the pure, living, breathing organism that it is. And it is when playing music with real acoustic instruments and unsampled vocals that these amps truly shine.

The LM-845 Premium does this even better than the other Line Magnetic amps, and also better than any other amp that I have heard, be it transistor or tube. But the LM-845 Premium further adds to this by also sounding more articulate and faster in the bass than the other Line Magnetic amps and it tops it off by equalling the CH Precision amp on many of its fortés, such as transparency, refinement and timbre/tonality.

## Comparisons in my head

Comparing the LM-845IA's performance in my head to other SET tube amps that I have used in these quarters it is also clear that none of them were this refined and airy, or as subtly detailed. The Ayon Crossfire III and Viva Verona XL both had the edge in terms of bass solidity and drive but were not nearly as refined and fluid as any of the Line Magnetic amps. I guess that's what you get when trying to produce transistor-like bass using a tube: surprisingly great bass at the expense of organic liquidity.

Various articles on this website contain parts where I've been euphorious about the Vaic Reference 520b's. Well, the former owner of these units (meneer Buis) and I agree that the LM-845 Premium performs on a higher level than those amps on all parameters when used with the Wilsons, except for dynamics and bass power. In part thanks to their parallel dual 52b Triodes, the Vaics are quite powerful in the bass, but also considerably less pure, transparent and refined than the Line Magnetic amp.

## Conclusion

All these Line Magnetic amps have their particular traits but they have some things in common: they are all refined, lively and richly textured, and all of them immediately invoke emotional involvement. Each of the amps performs superbly, especially given their price range. The bass lover in me has a mild preference for the LM-88IA and LM-150IA, the latter being particularly exquisite with the Apogee Duettas but overall, given a pair of speakers with sufficient sensitivity, I prefer the SET amps for their immensely pure and convincingly "live" character. These amps are just the best recipe to invoke goosebumps if speakers of high enough sensitivity are used.

The 845 Premium, finally, is so well-balanced, so pure, so rich in texture, so room-filling and so utterly emotionally engaging as well as superbly transparent, neutral and natural that it will spoil a person for lesser designs.

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## Company Websites

Manufacturer: [LM-audio.com](#)

Official EU Distributor: [Line Magnetic.eu](#)

Official NL Dealer: [Atube-HighFidelity](#)

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